

REMARKS

Claims 1– 10 are pending in the application.

Claims 1, 9, and 10 have been rejected under 35 USC 102(e) as being anticipated by Chandrasekhar et al (US Patent 6,785,446).

Claims 1-8 and 10 have been rejected under the judicially created doctrine of obviousness-type double patenting.

Claim 9 has been provisionally rejected under 35 USC 101 as claiming the same invention as claim 11 of copending Application No. 10/760,516.

Information Disclosure Statement

Applicant has noted that that only his IDS submitted on 9/17/2003 and not the list of references noted in the specification has been considered by Examiner.

Obvious Type Double patenting

Claims 1-8 and 10 have been rejected under the judicially created doctrine of obviousness-type double patenting.

A Terminal Disclaimer, Form PTO/SB/25, to obviate the provisional Double Patenting rejection over copending application No. 10/760,516 is attached hereto. Applicants' attorney certifies and Examiner should note that both the instant application and copending application No. 10/760,516 are commonly assigned to and owned by Lucent Technologies, Inc. The required Terminal Disclaimer Fee under 37 CFR 1.20(d) is provided for using attached Form –2038.

In view of the Terminal Disclaimer, the Provisional Obviousness-Type Double Patenting of claims 1 – 6, 8 – 18 should now be removed and these claims should now be allowable.

Double Patenting

Claim 9 has been rejected under 35 USC 101 as claiming the same invention as claim 9 of copending application No. 10/760,516.

Claim 11 has been canceled without prejudice in the amendment filed for copending application No. 10/760,516 and consequently, this Double Patenting rejection is mooted and claim 9 should now be allowable under 35 USC 101.

Rejections under 35 USC 102(e)

Claims 1, 9, and 10 have been rejected under 35 USC 102(e) as being anticipated by Chandrasekhar et al (US Patent 6,785,446).

Referring to independent claims 1 and 9, the Examiner has stated

“Chandrasekhar et al teach a series of three Mach\_Zehnder interferometers (411, 412, 413 in Fig. 4 or Column 5, lines 31-42). The first and third MZI’s (411, 413) both include fixed 50/50 couplers (402, 409).

Applicant agrees with Examiner’s interpretation with regard to claim 1 but not with regard to claim 9. Claim 1 clearly recites three MZI’s. However, claim 9 recites only two MZI’s, a first MZI and a second reflective MZI. The following discussion is directed to distinguishing Chandrasekhar from claim 1.

Regarding Claim 1

The Examiner then states

“The second MZI include a first adjustable coupler (411 as adjusted by 403 via Control 1A) and a second adjustable coupler (413 as adjusted by 406 via Control 1A).”

It appears that Examiner has characterized Chandrasekhar element 411 as both the first MZI and as the first adjustable coupler. Similarly Examiner has characterized element 413 as both the third MZI and as the second adjustable coupler. Examiner cannot have it both ways, the element 411 (and 413) cannot be both an MZI and a coupler in claim 1.

First we assume that the element 411 and 413 are both couplers. In Fig. 4, if element 411 is a coupler, element 412 an MZI, and element 413 a coupler, then Examiner's statement that "Chandrasekhar et al teach a series of three Mach\_Zehnder interferometers (411, 412, 413 in Fig. 4 or Column 5, lines 31-42)" is not true. Hence, Chandrasekhar does not teach our claim 1, line 4, which recites "three cascaded Mach-Zehnder interferometers."

We now assume that elements 411 and 413 are the first MZI and the third MZI, respectively. Our claim 1, at lines 5-7, recites

"a second MZI including a first adjustable coupler that is shared with the first MZI and a second adjustable coupler that is shared a third MZI"

In Chandrasekhar as noted by Examiner, the second MZI is 412 and the first MZI is 411 and, hence, the **shared** first adjustable coupler must be **404**. However as shown, element 404 is not an adjustable coupler as recited in our claim 1, at lines 4-6, but rather is a fixed coupler, as described in Chandrasekhar, at col. 5, lines 47-49. Similarly in Chandrasekhar, the second MZI is 412, the third MZI is 411 and, hence, the **shared** second adjustable coupler must be **407**. Again as shown, element 407 is not an adjustable coupler as recited in our claim 1, at lines 4-6, but rather is a fixed coupler, as described in Chandrasekhar, at col. 5, lines 47-49. Hence, Chandrasekhar does not teach sharing a "first adjustable coupler" and a "second adjustable coupler" as recited in our claim 1, lines 5-7.

Thus as discussed above, clearly Chandrasekhar does not teach what is recited in our claim 1. Moreover, Chandrasekhar is directed to an "optical equalizer for intersymbol interference mitigation" as opposed to our claim 1 which is directed to an "optical signal dispersion compensator." Hence, since Chandrasekhar does not do the same function, in the same manner, and produce the same results as recited in our claim 1, Chandrasekhar does not anticipate our claim 1 under 35 USC 102(e). Additionally Chandrasekhar does not suggest, hint, or otherwise make obvious under 35 USC 103, how their "optical equalizer for

intersymbol interference mitigation” can be adapted to implement the present “optical signal dispersion compensator” as recited in claim 1.

Regarding Claim 9

As noted above, claim 9 recites only two MZI’s, a first MZI and a second reflective MZI. Thus, Chandrasekhar does not teach what is recited in claim 9, namely,

- (1) the use of a “reflective” MZI, claim 9, lines 7-8;
- (2) a first MZI that is shared with a second reflective MZI, claim 9, lines 7-8; and
- (3) where “the path-length difference between the two arms in the second MZI is equal to that of the first MZI,” claim 9, lines 8-9.

For the above reasons, Chandrasekhar does not anticipate claim 9 under 35 USC 102(e). Additionally Chandrasekhar does not suggest, hint, or otherwise make obvious how their “optical equalizer for intersymbol interference mitigation” can be adapted to implement the present “optical signal dispersion compensator” as recited in claim 9. Thus, Chandrasekhar does not suggest, hint, or otherwise make obvious claim 9 under 35 USC 103.

Regarding Independent Claim 10

Independent claim 10 has been canceled without prejudice.

Regarding Dependent Claims 4, 6, 7, and 8

Dependent Claims 4, 6, 7, and 8 have been rejected under 35 USC 102(e) as being anticipated by Chandrasekhar. As discussed above, since independent claim 1 should now be allowable under 35 USC 102(e) and 103, so should dependent Claims 4, 6, 7, and 8 for the same reasons as claim 1.

Regarding Claim 2

Dependent claim 2 has not been rejected and is allowable over Chandrasekhar under 35 USC 102(e). Dependent claim 2 has been rewritten in independent form to include all the limitation of independent claim 1 and as rewritten independent claim 2 should be allowable under 35 USC 102(e) and 103.

Additional prior Art

The additional prior art made of record and not relied upon has been noted.

Summary

In summary for the above reasons, claims 1 –9 should now be allowable under 35 USC 101, 102(e), and 103 and the same is respectfully requested.

If there is any remaining issue, applicant's attorney would welcome a call from the Examiner to resolve such issue.

Respectfully,

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